

## **EUROPEAN PATENT OFFICE**

## Patent Abstracts of Japan

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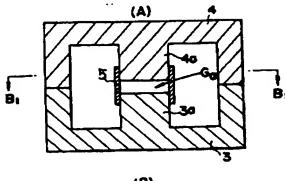
APPLICANT: TDK CORP:

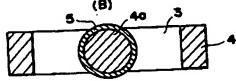
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: MAGNETIC CORE TITLE





ABSTRACT: PURPOSE: To control an unusual increase in output voltage or frequency at the time of light load when a magnetic core is used as the magnetic core for coil superimposing direct current by arranging a magnetic substance around the gap in the magnetic core haing the gap at a part of the magnetic core.

> CONSTITUTION: Two E shaped cores 3, 4 are combined and air gap Ga is formed between both the cores 3a-4a and a magnetic substance 5 is arranged around the air gap Ga. In this composition, when a choke coil or the like is composed by using the magnetic core, resultant magnetic permeability at the coupling part of the gap Ga and a magnetic substance 5 is decided by depending on the permeability of the magnetic substance 5 at a low current region where the magnetic substance 5 does not magnetically saturate and the value becomes extremely high. Therefore, inductance at a low current region of discontinuous choke current becomes extremely high and an increase in output voltage and frequency is controlled. Meanwhile, when a choke current reaches a fixed value or over, the magnetic substance 5 magnetically saturates. Therefore, flat current-inductance characteristics similar to the case of gap Ga only is obtained.

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